

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 21077 4/27/2001]

[Docket No. 97-NM-276-AD; Amendment 39-12205; AD 2001-08-28]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 767 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 767 series airplanes, that requires revising the Airworthiness Limitations Section of the maintenance manual (767 Airworthiness Limitations Instructions (ALI)). The revision will incorporate into the ALI certain inspections and compliance times to detect fatigue cracking of principal structural elements (PSE). This amendment is prompted by analysis of data that identified specific initial inspection thresholds and repetitive inspection intervals for certain PSE's to be added to the ALI. The actions specified by this AD are intended to ensure that fatigue cracking of various PSE's is detected and corrected; such fatigue cracking could adversely affect the structural integrity of these airplanes.

**DATES:** Effective June 1, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 1, 2001.

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Linda Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** John Craycraft, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington; telephone (425) 227-2782; fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 767 series airplanes was published in the **Federal Register** on January 28, 1999 (64 FR 4372). That action proposed to require revising the Airworthiness Limitations Section of the maintenance manual (767 Airworthiness Limitations Instructions (ALI)). The revision would incorporate into the ALI certain inspections and compliance times to detect fatigue cracking of principal structural elements (PSE).

**Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

## **Support for the Notice of Proposed Rule Making (NPRM)**

One commenter supports the NPRM.

### **1. Request to Use the Term Structural Significant Item (SSI) Rather Than “Principal Structural Elements (PSE)”**

One commenter requests that a clarifying note be added to the preamble of the proposal to explain why the term “PSE” is used in the NPRM, rather than “SSI,” as used in the Boeing 767 Maintenance Planning Document (MPD). The commenter states that such a note may avoid confusion between the use of the terms.

The FAA agrees that some clarification is necessary. We acknowledge that SSI’s are a subset of PSE’s, however, the Federal Aviation Regulations (FAR) related to damage tolerance refer only to PSE’s. Therefore, for the purposes of this AD, we consider the two terms interchangeable. A new NOTE 3 has been added to the final rule to clarify this information.

### **2. Request to Specify Proper MPD Subsection**

One commenter, the manufacturer, notes that the reference in the NPRM to “Chapter B” of Section 9 of Boeing 767 MPD is incorrect. The commenter states that the correct title is “Subsection B.”

The FAA agrees and has revised the final rule accordingly.

### **3. Request to Limit the Applicability of the NPRM**

One commenter requests that the applicability of the NPRM be revised to specifically exclude Boeing Model 767-300F (freighter) series airplanes.

The FAA agrees that clarification to specifically exclude Model 767-300F airplanes is necessary. The preamble of the NPRM specified that Model 767-300F freighter airplanes are not considered to be part of the applicability of this AD since the revision of the ALI that was in effect at the time of the first delivery of a Model 767-300F freighter already addressed the need for inspections of PSE’s. However, to ensure the clarity of this exclusion, we have added a new NOTE 1 to the final rule specifying that Model 767-300F freighter airplanes are not affected by this AD.

### **4. Requests Regarding Interpretation of Need for an Alternative Method of Compliance**

One commenter requests that, prior to the issuance of the final rule, the manufacturer be required to develop certain fatigue thresholds and damage tolerance analysis on all repairs installed per Boeing documents (e.g., service bulletins, structural repair manuals (SRM’s), etc.). The commenter explains that it interprets the language of NOTE 1 of the NPRM to mean that, for any repairs found on SSI’s during the initial or repeat inspections, the operator would be required to evaluate the repair, obtain a recommendation from a damage tolerance-certified Designated Engineering Representative, take corrective action, and obtain AMOC approval before returning an airplane to service. The commenter adds that the time involved for accomplishing those actions would inevitably result in extended down-time for the affected airplane, even though the existing repairs were previously FAA-approved. Another commenter expresses concern that any repairs or modifications to the SSI’s would automatically require AMOC approval and suggests that only those repairs or modifications that prevent the operator from performing the inspections would need to apply for an AMOC. That same commenter also expresses concern about the length of time it takes for approval of AMOC’s. The commenter requests that, instead of applying for an AMOC, the repair be analyzed for static strength, with a damage tolerance analysis to follow within one year.

The FAA does not agree with the commenter’s request to require that the manufacturer be required to develop, prior to the issuance of the final rule, certain fatigue thresholds and damage tolerance analyses on all repairs installed per Boeing documents (e.g., service bulletins, SRM’s, etc.). Boeing Model 767 series airplanes are certified to be damage tolerant; therefore, repairs to these airplanes are also required to be damage tolerant. With the addition to the maintenance manual of the ALI’s specified in this AD, both the original Model 767 structure and the repairs described in the 767 SRM are fully damage tolerant and comply with the applicable provisions of 14 CFR 25.571. If an

operator chooses to seek an extension of the inspection thresholds for certain repairs, it may do so per paragraph (c) of this AD. No change is necessary to the final rule in this regard.

However, the FAA considers that some information contained in NOTE 2 of the final rule should be clarified to accommodate certain airplanes that are required to have ALI's included in the maintenance program. Therefore, NOTE 2 (which revises NOTE 1 of the NPRM) of this final rule addresses airplanes that have been previously modified, altered, or repaired in the areas addressed by certain ALS inspections. Such modifications, alterations, or repairs may prevent the operator from being able to accomplish the specified inspections. We have provided guidance for this determination in Advisory Circular (AC) 25-1529. If the requirements of an AD cannot be performed, then operators must submit a request for an approval of an AMOC from the FAA, in accordance with the provision of paragraph (c) of this final rule. The new NOTE 2 of this AD is to clarify when an AMOC would be required.

#### **5. Requests to Revise Paragraph (a) of the NPRM**

One commenter, the manufacturer, reiterates that the NPRM would require that Section 9 of the MPD be revised to incorporate Chapter B. The commenter concludes that, since the manufacturer is the author of Section 9 of the MPD and has already incorporated Subsection B (the correct title of that section, rather than "Chapter B"), it is unnecessary to require that action to be accomplished by the issuance of an AD. Another commenter, an airline operator, states that revising the manufacturer's document is contrary to long-standing industry practices, whereby companies do not revise documents that are created, published, and maintained by other companies. Rather, as the manufacturer points out, Section 9 of the MPD is the manufacturer's responsibility, not the operators'.

The FAA does not agree. The airworthiness limitations, like the operating limitations, are a part of the type certificate for an airplane. Once an airworthiness certificate is issued for an airplane certifying that it conforms to an approved type design, this design is "locked" in the sense that the manufacturer cannot unilaterally change it for the subject airplane. Therefore, when the manufacturer makes any subsequent changes to the type certificate, including changes to the operating or airworthiness limitations, those changes are legally required only for products that are submitted for airworthiness certification based on a showing of conformity to the later design.

Thus, for many years, the FAA has imposed operating restrictions that are necessary to address identified unsafe conditions by requiring revisions to the operating limitations section of the Airplane Flight Manual (AFM). (Revision of the AFM by the type certificate holder would be effective only for airplanes produced after that revision.) Similarly, Boeing's revision to the ALI was effective only for airplanes later certificated with those revisions included in their type certificate. For this reason, as stated in the NPRM, we must engage in rulemaking (i.e., issuance of an AD), in order to make the revisions mandatory for previously certificated airplanes.

While the ALI's are contained in a "Boeing document" in the sense that Boeing originally produced it, the document, nevertheless, is a part of the instructions for continued airworthiness that operators must use to maintain the airplane properly. As explained in the NPRM, the effect of requiring that the document be revised to incorporate the current version of the ALI is that, in accordance with 14 CFR Part 91.403(c), operators are then required to comply with those limitations. This is analogous to the effect of requiring a revision to the operating limitations: in accordance with 14 CFR Part 91.9(a), operators are required to comply with the revised operating limitations.

Of course, those operators that have previously revised the ALI (or incorporated the revision into their maintenance programs) are given credit for having previously accomplished the requirements of this AD, as allowed by the phrase, "unless accomplished previously." The legal effect is the same: the operator is required to comply with the limitations per 14 CFR Part 91.403(c).

#### **6. Request to Clarify Intent of the NPRM**

One commenter states that paragraph (b) of the NPRM appears to conflict with the original intent of the NPRM. Paragraph (b) of the NPRM specifies that, after revising the MPD in accordance with paragraph (a) of the NPRM, no alternative inspections or inspection intervals shall be approved for the PSE's. The commenter explains that it is not clear why paragraph (b) is needed if the inspections

were accomplished in accordance with 14 CFR Parts 43 and 91. The commenter states that paragraph (b) of the NPRM essentially defeats the stated purpose of the NPRM, which is to have operators record their AD compliance only once (at the time the operator's maintenance program is changed), in order to reduce the burden of record keeping and tracking. Second, the commenter explains that paragraph (b) of the NPRM further conflicts with the stated purpose of the NPRM since the ALI itself allows operators certain flexibility in inspection methods and repetitive intervals (although not for initial inspection thresholds) through the use of Boeing's Damage Tolerance Rating (DTR) system.

The FAA does not agree. The purpose of this AD is to address the identified unsafe condition of fatigue cracking in certain PSE's. We have determined that, in order to accomplish that purpose, those airplanes must be brought into compliance with the certification basis, i.e., 14 CFR Part 25.571, amendment 25-45. We point out that paragraph (b) of the final rule merely repeats and enforces the provision presently existing in the Boeing 767 MPD, which requires any revision of the airworthiness limitations to be approved by the Seattle Aircraft Certification Office, FAA. We consider that paragraph (b) of the final rule, therefore, does not conflict with the intention to have operator's record their AD compliance only once. Additionally, this AD does not specifically address (or restrict) the use of the DTR specified in the ALI. No change is necessary to the final rule in this regard.

#### **7. Request to Provide Further Clarification Regarding Flight Cycles vs. Flight Hour Thresholds**

One commenter, the airplane manufacturer, states that, since there is reference to the 25,000 flight cycle threshold and 50,000 flight cycle threshold (in the preamble of the NPRM), it should also be noted that there is a flight cycle versus flight hour threshold for some flight length sensitive items. Also, the commenter notes that there are some other restrictions, such as a calendar threshold of 20 years unless an FAA-approved Corrosion Prevention and Control Program (CPCP) has been implemented, as well as a requirement to revert any escalated structural inspections back to the intervals specified in Section 8 of the MPD.

The FAA acknowledges that there is other information available in the revision to the MPD, which was not discussed in the preamble of the NPRM in the section entitled "New Revision of ALI." The information that we provided in the preamble of the NPRM was intended to be representative of the information that was used to determine that none of the airplanes affected is likely to reach the threshold for certain PSE's (identified as SSI's in the ALI). Since the "New Revision of ALI" section does not reappear in the final rule, no change to the final rule is necessary in this regard.

#### **8. Request to Revise Certain SSI Repairs**

One commenter requests that the requirements of the NPRM be revised to reflect certain repair actions for SSI's that were installed before the effective date of the AD, and certain other repair actions for SSI's that are installed after the effective date of the AD.

The FAA does not agree that the requirements of the NPRM should be revised. In the case of this final rule, the required action is simply to revise Section 9 of the Model 767 MPD by incorporating Subsection B, dated August 1997. The specific information contained in the MPD is developed (with the concurrence of the FAA) and then printed by the manufacturer. The FAA notes that the requirements of this AD do not address the accomplishment of the specific information contained in Subsection B. As discussed previously, 14 CFR 91.403(c) imposes that requirement, and NOTE 2 has been added to the AD to address the possible need to obtain approval of alternative methods of compliance for certain repairs. Therefore, no further change to the final rule is necessary in this regard.

#### **9. Request to Extend the Compliance Time**

One commenter, an operator, requests that the compliance time be revised from "within 3 years after the effective date of the AD" to "within 4 years after the effective date of the AD." The commenter states that the manufacturer originally recommended a compliance time of 5 years and, consequently, the commenter has been using a 5-year compliance time in its maintenance planning

activities. The commenter states that a 3-year grace period would cause excessive airplane downtimes and lost revenue costs.

The FAA does not agree with the commenter's request to extend the compliance time. For the reasons discussed in the preamble of the NPRM, this AD allows operators up to 3 years after the effective date of this AD to accomplish the ALI revision required by this AD. This period provides operators of airplanes that are approaching or have already reached the 25,000-flight-cycle inspection threshold with a reasonable amount of time to plan and perform the inspections. We note that only a few PSE's in the ALI have an initial inspection threshold of 25,000 total flight cycles. The majority of PSE's in the ALI have an initial inspection threshold that corresponds to the design service objective of the affected airplane (i.e., 50,000 total flight cycles for passenger airplanes). In addition, the Model 767 Structures Working Group, whose membership is composed of many of the major operators worldwide and almost all U.S. operators, has been aware of the specific contents and requirements of this ALI revision since August 1996. These facts have led us to determine that 3 years is an appropriate and reasonable period of time for operators to comply with the requirements of this AD. However, an alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be requested in accordance with paragraph (c) of this AD.

#### **10. Requests to Require Incorporation of ALI into Operations Specifications**

One commenter, the manufacturer, suggests that the NPRM be revised to require the operators to incorporate the ALI's into the appropriate Maintenance Program Specification (Operations Specification).

The FAA does not agree that incorporation of the ALI's into the Operations Specifications (Ops Specs) is appropriate. Operation of certain transport airplanes may be exclusively under the provisions and requirements of Part 91, and therefore, operators would not even be required to maintain Operations Specifications. Further, Ops Specs simply authorize the use of a Continuous Airworthiness Maintenance Program (CAMP) for the operator's individual airplane models and specify, in particular, that procedures, standards, checks, service, repair, and/or preventive maintenance, checks or tests, shall be described in the certificate holder's manual.

The commenter further requests that the requirements of the NPRM be written such that the operator's Operations Specification is continuously updated with the current revision of Section 9 of the MPD. If that process is not possible, the commenter suggests that the requirements be accomplished in accordance with the latest FAA-approved revision of Section 9 of the MPD.

The FAA does not agree with the commenter's requests. We note that the commenter provided no justification or benefit of implementing the suggested changes. In response to the suggestion that the Ops Specs be continuously updated with current revisions of Section 9 of the MPD, the FAA notes that incorporation of new revisions of the ALI into the Ops Specs would have the effect of imposing new requirements without providing notice to the public and opportunity for comment.

For a similar reason, to change paragraph (a) of this AD to incorporate any revision of Boeing Document D622T001-9 other than the "June 1997" (as specified in the NPRM), also would have the effect of imposing new requirements without providing notice to the public and opportunity for comment. We consider that delaying this action to provide for such notice to the public would be inappropriate since we have determined that an unsafe condition exists, and that inspections must be conducted to ensure continued safety. However, paragraph (c) of the final rule does provide affected operators the opportunity to request approval of an alternative method of compliance.

#### **Editorial Changes Appearing in the Final Rule**

To accommodate the addition of the new notes in the final rule, the FAA has revised the numbering of the notes that appeared in the NPRM.

#### **Conclusion**

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Cost Impact**

There are approximately 660 Boeing Model 767 series airplanes (excluding Model 767-300F freighters) of the affected design in the worldwide fleet. The FAA estimates that 250 airplanes of U.S. registry will be affected by this AD, that it will take approximately 1 work hour per airplane to accomplish the required actions, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be \$15,000, or \$60 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

Although this AD requires only a revision to the current ALI, the FAA recognizes that the inspections contained in the ALI will then be required by 14 CFR Parts 43 and 91. We estimate that it will take approximately 1,000 work hours to accomplish all of the ALI inspections. At an average labor rate of \$60 per work hour, the cost to perform the ALI inspections (14 CFR Parts 43 and 91, rather than by 14 CFR Part 39) will be approximately \$60,000 per airplane. We note that the majority of work hours needed to perform the inspections will be expended when an affected airplane reaches the 50,000 flight-cycle-threshold. Based upon current airplane utilization, we estimate that no airplane will reach this threshold for at least 10 years.

## **Regulatory Impact**

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption “ADDRESSES.”

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "av-info.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

## **2001-08-28 BOEING: Amendment 39-12205. Docket 97-NM-276-AD.**

Applicability: Model 767-200 and -300 series airplanes having line numbers 1 through 669 inclusive, certificated in any category.

NOTE 1: Boeing Model 767-300F freighter airplanes are not affected by this AD.

NOTE 2: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR Part 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR part 91.403(c), the operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include a description of changes to the required inspections that will ensure the continued damage tolerance of the affected structure. The FAA has provided guidance for this determination in Advisory Circular (AC) 25-1529.

Compliance: Required as indicated, unless accomplished previously.

To ensure continued structural integrity of these airplanes, accomplish the following:

### **Revise Section 9 of the Boeing 767 Maintenance Planning Data (MPD)**

(a) Within 3 years after the effective date of this AD, revise Section 9 of the Boeing 767 Maintenance Planning Data (MPD) Document entitled "Airworthiness Limitations and Certification Maintenance Requirements (CMR's)" to incorporate Subsection B of Boeing Document D622T001-9, Revision "June 1997."

NOTE 3: The referenced Subsection B contains a requirement that cracks found during the specified inspections be reported to the Seattle Aircraft Certification Office (ACO), FAA. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et seq.) and have been assigned OMB Control Number 2120-0056.

NOTE 4: For the purposes of this AD, the terms Principal Structural Elements (PSE's) as used in this AD, and Structural Significant Items (SSI's) as used in Section 9 of Model 767 MPD Document, are considered to be interchangeable.

### **Alternative Inspections and Inspection Intervals**

(b) Except as provided in paragraph (c) of this AD: After the actions required by paragraph (a) of this AD have been accomplished, no alternative inspections or inspection intervals shall be approved for the SSI's contained in Boeing 767 MPD Document D622T001-9, Revision "June 1997."

### **Alternative Methods of Compliance**

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

### **Special Flight Permits**

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

### **Incorporation by Reference**

(e) The actions shall be done in accordance with Subsection B of Boeing 767 Maintenance Planning Data Document D622T001-9, Revision "June 1997", which contains the following list of effective pages:

<b>Page Number</b>	<b>Revision Date Shown on Page</b>
List of Effective Pages, Page 9.0-5	June 1997

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

### **Effective Date**

(f) This amendment becomes effective on June 1, 2001.

FOR FURTHER INFORMATION CONTACT: John Craycraft, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington; telephone (425) 227-2782; fax (425) 227-1181.

Issued in Renton, Washington, on April 19, 2001.

Donald L. Rigglin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.